



Patent

Docket Number: ACE-00101.P.1.1-US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re application of:

Xu et al.

Application No.: 10/705,447

Filed: November 11, 2003

For: IMPEDANCE BASED DEVICES
AND METHODS FOR USE IN
ASSAYS

Examiner: To Be Determined

Art Unit: 1632

Commissioner for Patents
Alexandria, VA 22313

INFORMATION DISCLOSURE STATEMENT

Sir:

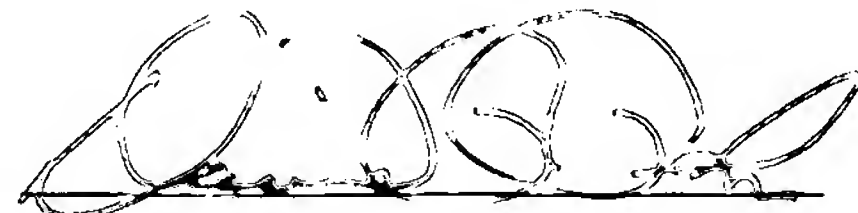
This Information Disclosure Statement is being filed before the mailing of a First Office Action on the merits under 37 C.F.R. § 1.97(a)(3). Accordingly, no fee under 37 C.F.R. § 1.17(p) is deemed necessary.

Applicants respectfully submit herewith a listing of references on the attached Form 1449 and three (3) volumes of cited references.

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Respectfully submitted,

Date: March 1, 2005



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PTO/SB/21 (09-04)

Approved for use through 07/31/2006. OMB 0551-0031

U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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**TRANSMITTAL
FORM**

(to be used for all correspondence after initial filing)

Total Number of Pages in This Submission

9

Application Number

10/705,447

Filing Date

11/10/2003

First Named Inventor

Xiao Xu

Art Unit

1632

Examiner Name

to be determined

Attorney Docket Number

ACE-00101.P.1.1-US

ENCLOSURES (Check all that apply)

Fee Transmittal Form



Fee Attached



Amendment/Reply



After Final



Affidavits/declaration(s)



Extension of Time Request



Express Abandonment Request



Information Disclosure Statement



Certified Copy of Priority Document(s)

Reply to Missing Parts/
Incomplete ApplicationReply to Missing Parts
under 37 CFR 1.52 or 1.53

Drawing(s)



Licensing-related Papers



Petition

Petition to Convert to a
Provisional Application

Power of Attorney, Revocation



Terminal Disclaimer



Request for Refund



CD, Number of CD(s) _____

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After Allowance Communication to TC

Appeal Communication to Board
of Appeals and InterferencesAppeal Communication to TC
(Appeal Notice, Brief, Reply Brief)

Proprietary Information



Status Letter

Other Enclosure(s) (please identify
below):**Remarks**

1. Listing of References on Form 1449;
2. 3 Volumes of cited references; and
3. Postcard

SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm Name

David R Preston & Associates

Signature

Printed name

David R Preston

Date

March 1, 2005

Reg. No.

38,710

CERTIFICATE OF TRANSMISSION/MAILING

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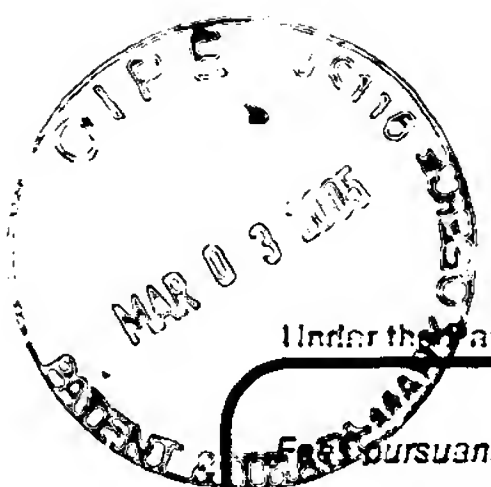
Raymond Wagenknecht

Date

3/1/2005

This collection of information is required by 37 CFR 1.5. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.11 and 1.14. This collection is estimated to 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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Effective on 12/03/2004.

Fees pursuant to the Consolidated Appropriations Act, 2005 (H.R. 4810).

FEE TRANSMITTAL

For FY 2005

☒ Applicant claims small entity status. See 37 CFR 1.27

TOTAL AMOUNT OF PAYMENT (\$) 0.00

Complete if Known

Application Number	10/705,447
Filing Date	11/10/2003
First Named Inventor	Xiao Xu
Examiner Name	to be determined
Art Unit	1632
Attorney Docket No.	ACE-00101.P.1.1-US

METHOD OF PAYMENT (check all that apply)

☐ Check ☐ Credit Card ☐ Money Order ☐ None ☐ Other (please identify): _____

☒ Deposit Account Deposit Account Number: 501321 Deposit Account Name: David R Preston

For the above-identified deposit account, the Director is hereby authorized to: (check all that apply)

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FEE CALCULATION

1. BASIC FILING, SEARCH, AND EXAMINATION FEES

Application Type	FILING FEES		SEARCH FEES		EXAMINATION FEES		Fees Paid (\$)
	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	Fee (\$)	Small Entity Fee (\$)	
Utility	300	150	500	250	200	100	_____
Design	200	100	100	50	130	65	_____
Plant	200	100	300	150	160	80	_____
Reissue	300	150	500	250	600	300	_____
Provisional	200	100	0	0	0	0	_____

2. EXCESS CLAIM FEES

Fee Description	Fee (\$)	Small Entity Fee (\$)
Each claim over 20 (including Reissues)	50	25
Each independent claim over 3 (including Reissues)	200	100
Multiple dependent claims	360	180
Total Claims _____ Extra Claims _____ Fee (\$) _____ Fee Paid (\$) _____		
_____ - 20 or HP = _____ x _____ = _____		
HP = highest number of total claims paid for, if greater than 20.		
Indep. Claims _____ Extra Claims _____ Fee (\$) _____ Fee Paid (\$) _____		
_____ - 3 or HP = _____ x _____ = _____		
HP = highest number of independent claims paid for, if greater than 3.		

3. APPLICATION SIZE FEE

If the specification and drawings exceed 100 sheets of paper (excluding electronically filed sequence or computer listings under 37 CFR 1.52(e)), the application size fee due is \$250 (\$125 for small entity) for each additional 50 sheets or fraction thereof. See 35 U.S.C. 41(a)(1)(G) and 37 CFR 1.16(s).

Total Sheets _____ Extra Sheets _____ Number of each additional 50 or fraction thereof _____ Fee (\$) _____ Fee Paid (\$) _____
_____ - 100 = _____ / 50 = _____ (round up to a whole number) x _____ = _____

4. OTHER FEE(S)

Non-English Specification, \$130 fee (no small entity discount)

Other (e.g., late filing surcharge): _____

Fees Paid (\$)

SUBMITTED BY

Signature	Registration No. 38,710 (Attorney/Agent)	Telephone 858-724-0375
Name (Print/Type) David R Preston		Date <u>March 1, 2005</u>

This collection of information is required by 37 CFR 1.136. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 30 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT (Use several sheets if necessary)	Docket Number: ACE-00101.P.1.1-US	Application Number: 10/705,447
	Applicant: Xiao Xu	
	Filing Date: November 10, 2003	Group Art Unit: 1632

U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
	P1	2002/0032531	03/2002	Mansky et al			
	P2	2002/0076690	06/2002	Miles et al			
	P3	2002/0086280	07/2002	Lynes et al			
	P4	2002/0110847	08/2002	Baumann et al			
	P5	2002/0150886	10/2002	Miles et al			
	P6	2,656,508	10/1953	Coulter			
	P7	3,259,842	07/1966	Coulter et al			
	P8	3,743,581	07/1973	Cady et al			
	P9	3,890,201	06/1975	Cady			
	P10	4,072,578	02/1978	Cady et al			
	P11	4,225,410	09/1980	Pace			
	P12	4,686,190	08/1987	Cramer et al			
	P13	4,920,047	04/1990	Giaever et al			
	P14	5,134,070	07/1992	Casnig			
	P15	5,187,096	02/1993	Giaever et al			
	P16	5,218,312	06/1993	Moro			
	P17	5,278,048	01/1994	Parce et al			
	P18	5,284,753	02/1994	Goodwin			

Examiner Signature		Date Considered	
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U.S. PATENT DOCUMENTS							
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB- CLASS	FILING DATE IF APPROPRIATE
	P19	5,563,067	10/1996	Sugihara et al			
	P20	5,626,734	05/1997	Docoslis et al			
	P21	5,643,742	07/1997	Malin et al			
	P22	5,801,055	09/1998	Henderson			
	P23	5,810,725	10/1998	Sugihara et al			
	P24	5,851,489	12/1998	Wolf et al			
	P25	5,981,268	11/1999	Kovacs et al			
	P26	6,051,422	04/2000	Kovacs et al			
	P27	6,132,683	10/2000	Sugihara et al			
	P28	6,169,394	01/2001	Frazier et al			
	P29	6,232,062	05/2001	Kayyem et al			
	P30	6,235,520	05/2001	Malin et al			
	P31	6,280,586	08/2001	Wolf et al			
	P32	6,288,527	09/2001	Sugihara et al			
	P33	6,368,851	04/2002	Baumann et al			
	P34	6,376,233	04/2002	Wolf et al			
	P35	6,448,030	09/2002	Rust et al			
	P36	6,448,794	09/2002	Cheng et al			
	P37	6,472,144	10/2002	Malin et al			
	P38						

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FOREIGN PATENT DOCUMENTS								
EXAMINER INITIAL		DOCUMENT NUMBER	DATE	COUNTRY	CLASS	SUB- CLASS	Translation	
							YES	NO
	F1	96/01836	01/1996	PCT				
	F2	99/66329	12/1999	PCT				
	F3	00/71669	11/2000	PCT				
	F4	01/038873	05/2001	PCT				
	F5	02/42766	05/2002	PCT				
	F6							

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	D6	Burns et al, Neutrophil Transendothelial Migration Is Independent of Tight Junctions and Occurs Preferentially at Tricellular Corners. Journal of Immunology 2893-2903 (1997)

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	D7	Duan et al, Separation-Free Sandwich Enzyme Immunoassays Using Microporous Gold Electrodes and Self-Assembled Monolayer/Immobilized Capture Antibodies, Anal. Chem. 66:1369-1377 (1994)
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	D17	Hidalgo et al, Characterization of the Human Colon Carcinoma Cell Line (Caco-2) as a Model System for Intestinal Epithelial Permeability. Gastroenterology 96:736-749 (1989)
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
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	D19	Keese et al, Real-time impedance assay to follow the invasive activities of metastatic cells in culture. Biotechniques 33:842-850 (2002)
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
EXAMINER INITIALS		CITATION
	D32	Pancrazio et al, Portable cell-based biosensor system for toxin detection. Sensors and Actuators B 53:179-185 (1998)
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Examiner Signature		Date Considered	
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages, Etc.)		
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	D45	Wang et al, Dielectrophoretic Manipulation of Cells with Spiral Electrodes. Biophysical Journal 72:1887-1899 (1997)
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	D53	http://www.neuroprobe.com/protocol/pt_96a.html
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	D55	http://www.tecan.com/migration_introl.pdf
	D56	New Products page. Science 298:2409 (2002)
	D57	Abstract: Real-Time Impedance Assay to Follow the Invasive Activities of Metastatic Cells in Culture. Biotechniques 33: 842 (2002)
	D58	http://www.biophysics.com/pages/front.html

Examiner Signature		Date Considered	
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